

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A method of patterning magnetic material comprising:

(a) preparing a ferromagnetic material layer containing at least one element selected from the group consisting of Fe, Co and Ni;

(b) masking a surface of the ferromagnetic material layer selectively; and

(c) making nonferromagnetic comprising, wherein

the making nonferromagnetic comprises:

exposing an exposed portion of the surface of the ferromagnetic material layer in halogen-containing active reaction gas or reaction liquid [[,]]; :

converting the exposed portion and a lower layer thereof into a compound with a component in the reaction gas or the reaction liquid by chemical reaction; and

making the compound nonferromagnetic; and

producing in the ferromagnetic material layer at least one region where both the surface of the ferromagnetic material layer and an interior portion of the ferromagnetic material layer are nonferromagnetic.

Claim 2 (Original): The method of claim 1, wherein the halogen is fluorine.

Claim 3 (Original): The method of claim 1, wherein the compound is cobalt fluoride.

Claim 4 (Original): The method of claim 1, wherein the halogen-containing active reaction gas is generated by a plasma generating apparatus.

Claim 5 (Original): The method of claim 1, wherein the masking and the making nonferromagnetic steps write servo information for controlling at least one of a position and a speed on the ferromagnetic material layer, the position and the speed are relative to a magnetic head.

Claim 6 (Previously Presented): The method of claim 1, wherein the masking step comprises:

forming a block copolymer layer comprising a plurality of island regions and a separation region that separates the island regions from each other, on the surface of the ferromagnetic material layer by a self-organization phenomenon; and
removing the separation region selectively.

Claims 7-19 (Canceled)

Claim 20 (Currently Amended): The method of claim 19 1, wherein a ratio of a thickness of the nonferromagnetic interior portion of the ferromagnetic material layer to a thickness of the ferromagnetic material layer is in a range of from 0.5 to 1.0.